

Grocers Guide to



Weights & Measures

A publication from the Weights & Measures Division

Introduction

The primary purpose of this handbook is to promote communication and cooperation between the Weights and Measures Division and the businesses we regulate. Improving the compliance rate for package checking inspections is the ultimate goal. The division relies heavily on education and cooperation from merchants, working closely with commercial organizations in educating their members on the problems and issues associated with ensuring accuracy.

To help maintain a level playing field, standards developed in the National Institute of Standards and Technology (NIST) Handbooks 44, 130, and 133 must be applied uniformly in the marketplace. Consistent, uniform application of regulations ensures fairness between the buyer and seller, and between competing businesses filling the same market niche. Consumers have the right to expect packages to bear accurate net content information. Likewise, as a retailer, you have the right to expect that your competitors are following the same rules you are.

This handbook provides the basic information you need to meet standard requirements for packaging and accurate weighing.

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Inspections

This section describes the different types of inspections conducted by the Weights and Measures Division and how they are conducted.

Scale Requirements

This section provides basic requirements for commercial scales, scale installation and scale inspections.

Method of Sale

Should radishes be sold by weight, count or bunch? Based on excerpts from NIST Handbook 130, this section provides method of sale requirements for fresh fruits and vegetables, meat and poultry, deli and bakery items, and fireplace and stovewood.

Package Requirements

Based on excerpts from the NIST Handbook 133, this section provides tips on how to produce accurate packages.

Tare Weight

This section describes the proper procedures for determining tare weight at the checkout register and deli.

Cost of Errors

Three charts illustrate how small errors can add up to big losses in a typical large metropolitan grocery store.

Common Problems

This section discusses common problems encountered in Minnesota stores.

References

Minnesota Statutes and Rules

Excerpts from Minnesota Statutes, Chapter 239 and Minnesota Rules, Chapter 7601 pertaining to package checking and scale inspection as well as the legal responsibilities and duties of the Weights and Measures Division.

Joint Policy with Department of Agriculture

This memo explains the Revised Joint Policy between the Department of Commerce and the Department of Agriculture regarding specific packaging requirements for certain produce, deli, meat and poultry and bakery items. The memo defines a common regulatory approach so the two agencies can apply state laws and rules in a uniform, non-conflicting manner.

NIST Handbooks

How to obtain the three NIST publications that apply to retail grocery operations:

- Handbook 44: Specifications, Tolerances, and other Technical Requirements for Weighing and Measuring Devices
- Handbook 130: Uniform Laws and Regulations
- Handbook 133: Checking the Net Contents of Packaged Goods

Contacts

Who to contact for more information.

Inspections



The Weights and Measures division may conduct inspections for several reasons. It may be a regular inspection, which is required by state law, or it could be in response to a consumer complaint or part of a regional or national investigation. In all cases, inspections are conducted on a random basis and you will not be given advance notice that the inspectors are coming to your store.

Basic Requirements:

Regular Inspections

Regular inspections are conducted once every 36 months at a particular store. The inspector will concentrate on, and charge a fee based on all bakery, produce, deli, meat, and dairy products produced or weighed at the location, or packaged at a different location under the store's name or brand. Before selecting the random samples for inspection, all packages at the location will be counted. The inspector will then determine the size of the inspection lots and the number of lots to be inspected. In large stores it is common to have several lots each of fresh meat, pre-packaged items, deli items, and produce.

Each inspection lot will either pass or fail. If all lots pass, the store is in compliance. Inspection lots failing the regular inspection will be scheduled for re-inspection. A written warning or caution will be issued.

Re-inspections:

Re-inspections of failed lots are conducted within 30 days of the regular inspection. The entire store will not be re-inspected, only the commodity lot that previously failed. Fees charged for re-inspection are based on the total number of packages in the failed lot(s). If the lot passes re-inspection, the store is then considered in compliance. If the lot fails re-inspection, the Package Checking Program Administrator will determine whether to conduct another re-inspection or to pursue legal action.

Audit Inspections

An audit inspection is an informal inspection usually conducted without an inspection fee. The inspection may be in response to a consumer complaint or as a part of a larger, comprehensive investigation. An audit inspection may also be conducted to monitor previously identified problem areas or new items. If the audit shows shortages in net contents, a complete formal inspection will be conducted.

Standard Package Inspections

Formal inspections of standard packaged items will be conducted in response to consumer complaints or as a part of regional or national investigations. Since the products subject to the inspection are not packed or weighed on site or packaged at another site under the store's name or brand, there is no fee associated with the inspection.

Bulk Sales Inspections

Reviewing proper methods of sale and correct tare procedures for bulk sale items are usually conducted during regular inspections. The inspector will simulate direct cash register sales of selected items to determine if proper tare procedures are applied at the point of sale.

How to Assist with Inspections

If the storage, display, or location of any lot of packages requires special equipment or an abnormal amount of labor for inspection, the owner or operator of the business must supply the equipment and/or labor as required by the Weights and Measures official.

- Inspectors require a work area to set up test equipment in close proximity to the inspection lots.
- Inspectors require access to storage areas where additional products may be located.
- Inspectors require use of packaging materials on site for proper tare determination.

Inspection Fees

Inspection fees for regular inspection are determined by the total number of random weight packages on display at the location.

Current fees are as follows

1 to 100 packages	\$45.50
101 to 500 packages	\$110.50
501 to 1500 packages	\$286.00
Over 1500 packages	\$429.00

Fees for re-inspection are as follows:

1 to 300 packages	175.50
301 to 500 packages	\$240.50
501 to 1500 packages	\$416.00
Over 1500 packages	\$559.00

Definitions:

Lot

An inspection lot, or “lot” is defined as a collection of identically labeled packages (except in the case of random packages) available for inspection at one time. The Inspector tests a sample of the packages in a lot, then passes or fails the entire lot based on the results of the samples tested.

The above rules and regulations come from Minnesota Statutes, Chapter 239 and Minnesota Rules, Chapter 7601. For more information, see the Statutes and Rules in the back of this handbook or call the Weights and Measures Division at 651-539-1555.

Scale Requirements

The Weights and Measures Division inspects commercial scales during routine inspections, anytime a new scale is installed or found, or in response to consumer complaints. If a scale passes inspection, the investigator will attach a dated approval sticker to the scale. The investigator will reject any scale that is not accurate, not of commercial quality, or that is not suitable for its intended use.



Basic Requirements:

You must have an NTEP approved commercial scale if you buy or sell a commodity or service by weight.

Your scale must also be of commercial quality if it prints price labels for meat, deli, bakery, produce or other items.

A commercial scale must be suitable for its intended use.

This is determined by the division size, or the value of the smallest unit you can read on the scale. For a suitable scale, the minimum load to be weighed must be 20 or more scale divisions. For example, a scale with a division size of .05 lb. is suitable for loads of one pound or more. Electronic scales used to weigh meat and print a label must not have a division size larger than .01 lb. Mechanical meat scales must not have division sizes larger than one ounce.

New scales must be inspected.

If you purchase a scale from a scale company that is registered with the Weights and Measures Division, the scale company will notify the division. The scale may be used commercially at time of installation. An investigator will test the scale within 30 days of installation.

If you purchase a scale from a private party, a catalog, or a non-registered company, you are responsible for notifying Weights and Measures to arrange for an inspection. You may not use the scale until it is tested and approved by division personnel.

If your scale is rejected.

The investigator will attach a rejection tag to the scale and provide you with a rejection report detailing reasons for rejection.

If the investigator attaches a yellow tag to the scale, you may continue to use the scale but it must be repaired within 30 days.

If the investigator attaches a red tag to the scale, the scale is immediately removed from service and may no longer be used commercially until it has been repaired.

Specific information concerning rejected equipment is provided on the back of the rejection report.

How to install and operate your scale system:

Scale Installation

Always install scales according to the manufacturer's instructions, including any instructions marked on the device. When installing a scale in a fixed location make sure that the foundation, supports, or any other detail of the installation will not disturb the scale's operation or performance.

Deli scales placed on shelf units attached to the deli case must be stable so the scale can maintain a level condition.

Pre-pack scales placed on some stainless steel tables do not meet this requirement.

Position of Equipment

Scales equipped with a weight display and used in direct sales (except a prescription scale) should be positioned so that customers can "reasonably" see the display and observe the weighing or measuring operation.

The weight display must not be obscured by signs or other products.

Scales equipped with a "mast" indicator must be positioned so customers can see the display.

All direct sale weighing operations must take place in full view of the customer

Customer's Indications

Weight displays must be shown on the customer's side of computing scales when these are used for direct sales to retail customers. Computing scales equipped on the operator's side with digital indications, such as the net weight, unit price, or total price, must show the same information on the customer's side.

Point of Sale Systems

The sales information recorded by cash registers that are interfaced with a scale must contain the following information for items weighed at the checkout stand:

- the net weight
- the unit price
- the total price, and
- the product class; or, in a system equipped with a price look-up capability, the product name or code number

All of the above items must appear on the cash register receipt.

Tare

On any scale, the tare division must be equal to the scale division. For example, if the scale has .01 divisions, the tare divisions must also be .01.

The tare mechanism must operate only in a backward direction (that is, in a direction of under-registration) with no load on the scale.

A device designed to automatically clear any tare value must also be designed to prevent the automatic clearing of tare until a transaction has been completed.

For more information on Tare requirements, see the Tare Weight section.

Foundations, Supports, and Clearance

The foundation and supports of any scale installed in a fixed location should provide strength, rigidity, and permanence of all components. Provide clearance around all "live" parts so that nothing touches the scale itself or interferes with items placed on the scale.

Product displays must not interfere with the scale.

Debris must be cleared from the edges of a scanner platter on a regular basis to insure accurate weighing. Binding usually causes losses to the scale owner.

All check out scales should be inspected at least daily to make sure they are in a zero-balance condition. Scales that do not return to zero are defrauding the customer.

Recommended Minimum Load

A recommended minimum load is specified as 20 scale divisions for Class III scales (grocery scales) since weighing light loads is likely to result in large errors.

The recommended minimum load for a grocery scale with .01 pound scale divisions is .2 pounds. For a scale with .005 pound divisions the recommended minimum load is .1 pounds.

Scales used to weigh bulk spices, herbs, tobacco, or similar products with a unit price of \$5.00 an ounce or greater that are not pre-packaged, but weighed at the checkout at the point of purchase must be weighed on a scale with a scale division of .001 pound, or .5 grams or less. When weighing these items at the point of sale, you should not weigh amounts of less than 20 scale divisions, since weighing light loads is likely to result in large errors.

Technical Details:

Commercial quality scales

Any commercial scale manufactured after January 1, 1986 must be labeled Class III. It will have an identification plate with the serial number, manufacturer, model number, maximum capacity, number of divisions and size of the smallest division.

Commercial scales manufactured before January 1, 1986 may be labeled Class III and have an identification plate as described above. A scale manufactured before 1986 which has no class marking is considered "commercial quality" if it has a manufacturer's name, serial number, maximum capacity, and division size printed on the scale.

New scales installed in Minnesota that were manufactured after January 1, 1996 must have a Certificate of Conformance issued by the National Type Evaluation Program.

In order to meet commercial quality requirements, mechanical scales must have a zero adjustment that requires a tool for operation. Electronic scales must have a means for sealing the calibration adjustment mechanism.

Bathroom scales, baby scales, portion scales, scales marked *Not Legal for Trade*, and mechanical scales with thumb screw zero adjustments, are not commercial quality scales and cannot be used commercially in Minnesota.

Technical Details:

A commercial scale is defined as any scale used to buy or sell commodities or services when the price is determined by weight.

These requirements are from the Weights and Measures Division and from selected portions of the NIST Handbook 44: Specifications, Tolerances and other Technical Requirements for Weighing and Measuring Devices. For more information call the Weights and Measures Division at 651-539-1555.

Method of Sale Requirements



Consumers can easily become confused when more than one method of sale is used in the same store for the same product. Therefore, the following standard units of measure have been developed for fruits and vegetables, deli products, meat and poultry, bakery items and stovewood. Use these rules unless directed otherwise by the Weights and Measures Division.

Basic Requirements:

All items weighed and sold at the register must include deductions for tare weight (protective wrap, plastic bag, bag closure device and rubber band).

All packaged items sold by weight must be labeled with the net weight, unit price and total price.

Fresh Fruits and Vegetables

Method of Retail Sale for Fresh Fruits and Vegetables Specific Commodity					
Commodity	Weight	Count	Head or Bunch	Dry Measure (any size)	Dry Measure (1 dry qt or larger)
Artichokes	X	X			
Asparagus	X		X		
Avocados		X			
Bananas	X	X			
Beans (green, yellow, etc.)	X				X
Brussels Sprouts (loose)	X				
Brussels Sprouts (on stalk)			X		
Cherries	X			X	X
Coconuts	X	X			

Method of Retail Sale for Fresh Fruits and Vegetables Specific Commodity					
Commodity	Weight	Count	Head or Bunch	Dry Measure (any size)	Dry Measure (1 dry qt or larger)
Corn on the Cob		X			X
Dates	X				
Eggplant	X	X			
Figs	X				
Grapes	X				
Melons (cut in pieces)	X				
Mushrooms (small)	X			X	X
Mushrooms (portobello, large)	X	X			
Okra	X				
Peas	X				X
Peppers (bell and other varieties)	X	X			X
Pineapples	X	X			
Rhubarb	X		X		
Tomatoes (except cherry/grape)	X	X			X
More commodities in table on next page					

Method of Retail Sale for Fresh Fruits and Vegetables General Commodity Groups					
Commodity	Weight	Count	Head or Bunch	Dry Measure (any size)	Dry Measure (1 dry qt or larger)
Berries and Cherry/Grape Tomatoes	X			X	
Citrus Fruits (oranges, grapefruits, lemons, etc.)	X	X			X
Edible Bulbs (onions [spring or green], garlic, leeks, etc.)	X	X	X		X
Edible Tubers (Irish potatoes, sweet potatoes, ginger, horseradish, etc.)	X				X
Flower Vegetables (broccoli, cauliflower, brussel sprouts, etc.)	X		X		
Gourd Vegetables (cucumbers, squash, melons, etc.)	X	X			X
Leaf Vegetables (lettuce, cabbage, celery, etc.)	X		X		
Leaf Vegetables (parsley, herbs, loose greens)	X		X	X	
Pitted Fruits (peaches, plums, prunes, etc.)	X	X			X
Pome Fruits (apples, pears, mangoes, etc.)	X	X			X
Root Vegetables (turnips, carrots, radishes, etc.)	X		X		

**Commodities sold by measure must be sold in containers standardized by the Berry Basket and Box Code in Handbook 44.*

Deli Items

Standard weight packaged deli items such as sandwiches, salads, cheeses, sliced meats, parfait cups, casseroles, party trays, pizza and dinners must be labeled with the net weight of the package and the price.

Random weight packaged deli items such as the items listed above must be labeled with the net weight of the package, unit price and total price.

Meat and Poultry

Packaged turkeys and other random weight whole poultry:

- Must be sold by weight and labeled with net weight, unit price and total price.
- They must not be weighed at time of sale at the register.

Cut up or processed poultry or meat:

- Packaged random weight poultry and meat products must be labeled with net weight, unit price and total price.
- Standard packaged poultry and meat (all packages of the same commodity that have the same net weight) must be labeled with a net weight. The price of these packages must be clearly marked at the display location.
- Only unpackaged poultry and meat products may be weighed at time of sale.

Bakery

- All pre-packaged bakery items must be labeled with the correct net weight.
- This requirement does not prohibit including a count on the label (e.g. cookies, donuts).

Fireplace and Stovewood

Fireplace and stovewood must be advertised, offered for sale, and sold only by measure, using the term “cord” and fractional parts of a cord, or the cubic meter, except in the case of packaged natural wood:

Packaged Natural Wood. Natural wood offered for sale in packaged form in quantities less than 1/8 cord or 16 cubic feet must display the quantity in terms of cubic feet, or fractions of cubic feet.

These methods include the directives from the Revised Joint Policy from the Department of Commerce and the Department of Agriculture (See Reference Section) and requirements listed in the NIST Handbook 130: Uniform Laws and Regulations.

For more information, call the Weights and Measures Division at 651-539-1555.

Package Requirements



Consumers have the right to get what they pay for. They expect that the “net weight” of packaged items are weighed and labeled accurately. Retailers have the right to be held to reasonable standards and to expect their competitors to meet the same standards.

Basic Requirements:

Net weight must be accurate.

Packages must contain the weight shown on the label. Reasonable variations are allowed.

- Accuracy is determined by looking at the average net weight of all the packages in a “lot.”
- A lot containing 50 one-pound packages is accurate if the average weight of the packages is one pound.
- Some of the packages will weigh slightly more or less than one pound, but the lot is considered accurate if the average is accurate.

Understand tare weights (*See Tare Weight section for more information.*)

- Consumers are not expected to pay for the packaging when they purchase a packaged commodity.
- “Tare” includes soaker pads, labels, wire closures, mesh bags, staples, skewers, coupons, glazing, liquid, prizes or decorations that may be part of the packaging.
- “Tare weight” is the weight of a container, wrapper, or other material that is deducted from the gross weight to obtain the net weight of the packaged product.

How to Produce Accurate Packages:

Use the features of your weighing system

- Use the operator's manual for the scale.
- Understand how to manually override the tare values programmed into the scale system.

Maintain accurate tare weights

- Periodically check the tare values stored in the scale. Inform the central tare administrator of any errors.
- Verify dry tare values by weighing the tare products. Make sure your packaging matches the programmed tare.
- Conduct your own audit inspection of the packages in your display.
- Update the tare values when your packaging material changes.
- Maintain a current list of pre-packaged tare values from outside distributors (i.e. Hormel).

Minimize human error

- Most packaging errors are human errors.
- A common error occurs when multiple size packages are used for one product.
- Another common error is the failure to update tare values in a timely manner.
- Continual staff training is recommended to avoid these errors.

Technical Details:

The following requirements are from NIST Handbook 133. Both requirements apply to the inspection of all lots of packages.

Average requirement

In general, the average net quantity in a "lot" of packages must be equal to the net quantity on the label. Plus or minus variations are permitted when they are caused by unavoidable variations in weighing, measuring or counting the contents of individual packages that occur in good manufacturing practice—as long as the average package quantity in the lot is not below the stated quantity.

Individual package requirement

While the goal in individual packaging is to have the actual contents be equal to the quantity on the label, some reasonable variations are allowed. Any packages that are under filled by more than a “reasonable” amount will be considered unreasonable errors.

Unreasonable shortages are not generally permitted, even though other packages in the same lot or shipment are overfilled. There are no specified limits for overfilling, which is usually controlled by the packer.

The limit for what qualifies as a “reasonable” shortage error is called the Maximum Allowable Variation (MAV). Packages that are under filled by more than the MAV are considered unreasonable errors. The MAV values are listed in NIST Handbook 133 and the amount varies according to the size of the package. For example, the MAV for a one-pound package is .044; for a 3-pound package it is .094; and, for a 5-pound package it is .14.

Definitions:

Lot

An inspection lot, or “lot” is defined as a collection of identically labeled packages (except in the case of random packages) available for inspection at one time. The inspector tests a sample of the packages in the lot, then passes or fails the entire lot based on the results of the samples tested. (See the Inspections section for more information.)

Maximum Allowable Variation (MAV)

The limit of “reasonable variation” for an individual package is called a Maximum Allowable Variation. An MAV is a deviation from the labeled weight, measure, or count of an individual package. Any packages with a deficiency beyond this amount are considered to be unreasonable.

No packages are allowed to exceed the MAV in lot sizes of 3,200 or less packages.

These requirements are from selected portions of the NIST Handbook 133: Checking the Net Contents of Packaged Goods. For more information call the Weights and Measures Division at 651-539-1555.

Tare Weights

Dealing with tare weights is a common source of errors in retail grocery operations. These small errors multiplied hundreds of times each day can cost the store or its customers more than you might think. “Tare” refers to packaging materials (bags, trays, containers, etc.) which customers are not expected to pay for. The weight of the tare materials must be subtracted from the gross weight of the packaged product in order to determine the correct net weight and the correct price.



Tare weights are commonly determined by personnel in the meat and produce departments, deli counter, and at the check-out register. All of these areas present unique problems that can result in inaccurate net weight determination. (See the *Common Problems* section for more information on determining tare weight.)

The responsibility to accurately apply tare weights to packages that are weighed at the store lies solely with the retailer.

Technical Details:

Items packaged on site: Tare weight can easily be determined by separately weighing the dry packaging material.

Pre-packaged random weight items: Tare weight for case ready items must be obtained from the manufacturer. Many times these tare weights are printed on the outside of the case. Good communication with suppliers is essential in order to maintain accurate, up-to-date tare information.

Bulk items: Tare weight must be deducted from the gross weight at the point of sale. These are products that the consumer selects and places in a package (usually a bag) to be weighed at the checkout register.

- Even a thin plastic bag with a wire closure requires a tare of .01 pound.
- Bags for bulk coffee beans typically require a .03 pound tare.

Problems occur when the same product may be placed into more than one size bag. Apples are a prime example. The consumer can select a few apples and place them in a thin plastic bag or they can purchase a kraft bag of a larger quantity. In both cases, the apples are sold by weight at the same unit price. In order to ensure accurate net weight, two different tare weights must be used for the same product. If the cashier cannot manually enter the proper tare weight and only a single PLU tare is programmed, you must use a greater tare value to ensure that the customer is not being shorted.

This problem can occur with any product where the customer may select more than one size of bag or container.

Deli items: With the exception of the thin sanitary tissue placed on the scale platter, all direct sales must account for the weight of the container or bag into which the product is placed. As with the apple example above, multiple container sizes for the same product will require multiple tare values.

Glazed fish and seafood: The frozen water glazing on fish and seafood is not considered part of the net weight. It is part of the tare weight.

Suppliers must provide the retailer with the proper tare value for the glazing. Glazed fish and seafood in a service case must have a proper tare assigned for direct sales. Commonly this is computed as a percentage of the gross weight of the fish or seafood.

Tare weight for **oysters and herring:** Oysters removed from the shell and pickled herring may be sold by weight, drained weight, or by fluid volume. However, if sold by weight or volume, a maximum of 15 percent free liquid is permitted.

How to Maintain Accurate Tare Weights:

- Periodically check the tare values stored in the scale. Inform the central tare administrator of any errors.
- Correct mislabeled tare values.
- Verify dry tare values by weighing the tare products. Make sure your packaging matches the programmed tare.
- Conduct your own audit inspection of the packages in your display.
- Update the tare values when your packaging material changes.
- Maintain a current list of pre-packaged tare values from outside distributors (i.e. Hormel).
- Keep your packagers and clerks well trained in determining correct tare weights. This includes teaching them to over-ride the programmed system and enter the correct tare weight when necessary.

Technical Details:

There are three types of tare for the inspection of packaged goods.

Unused Dry Tare includes all unused packaging materials (including pads, labels, ties, glazing, etc.) that contain or enclose a product. It includes prizes, gifts, coupons, dressing packets, or decorations that are not part of the product.

- Inspectors will determine tare weights from unused packaging materials located on site.

Used Dry Tare includes used tare material that has been air dried, or dried in some manner to simulate unused tare weight. It includes all packaging materials that can be separated from the packaged product, either readily (e.g., by shaking) or by washing, scraping, ambient air drying, or other techniques, but not including laboratory procedures like oven drying.

- If an inspector is unable to determine proper tare values for pre-packaged products, it will be necessary to open packages.

Wet Tare refers to used tare material where no effort is made to dry the material. Free flowing liquids are considered to be part of the tare weight. Few jurisdictions use this method since all sample packages must be opened to determine net weight. *Minnesota does not use this method.*

Definitions:

Tare weight

The weight of a container, wrapper, or other material that is deducted from the gross weight to obtain the net weight.

Soaker pads, labels, wire closures, mesh bags, staples, skewers, coupons, prizes, glazing, liquid, and decorations not part of the product are all considered as components of the total tare weight.

For more information, call the Weights and Measures Division at 651-539-1555.

Cost of Errors

Even small errors can add up to surprisingly big losses—either for grocery stores or their customers. The following three charts show how something as small as an incorrect tare value, when multiplied by thousands of packages, can affect the bottom line of a typical large metro area grocery store.



Fresh and Frozen Meat Department

Annual Sales		\$2,750,000		
Annual Pounds Sold		926,000		
Average Price per Pound		\$2.97		
		Error per Package		
Packages sold	Package size	0.01 lb.	0.02 lb.	0.03 lb.
370,400	1 pound	\$11,001	\$22,002	\$33,003
92,600	2 pounds	\$2,750	\$5,500	\$8,251
77,200	3 pounds	\$2,293	\$4,586	\$6,879
27,800	5 pounds and greater	\$826	\$1,651	\$2,477
	TOTALS	\$16,870	\$33,739	\$50,609



Seafood Department

Annual Sales **\$538,000**
Annual Pounds Sold **78,100**
Average Price per Pound **\$6.89**

Error per Package

Packages sold	Package size	0.01 lb.	0.02 lb.	0.03 lb.
40000	1 pound	\$2,756	\$5,512	\$8,268
15000	2 pounds	\$1,034	\$2,068	\$3,102
2500	3 pounds	\$172	\$344	\$516
	TOTALS	\$3,962	\$7,924	\$11,886



Smoked Meats and Sausage

Annual Sales **\$162,200**
Annual Pounds Sold **59,750**
Average Price per Pound **\$2.71**

Error per Package

Packages sold	Package size	0.01 lb.	0.02 lb.	0.03 lb.
45,000	1 pound	\$1,220	\$2,440	\$3,660
7,375	2 pounds	\$200	\$400	\$600
	TOTALS	\$1,419	\$2,840	\$4,260

Common Problems in the Market Place

Over the years, the Weights and Measures Division has observed several common problems regarding the accuracy of net contents. These problems are repeatedly encountered in various sized stores statewide. The following list will help you identify and reduce the number of these occurrences.



Centralized Program Tare Systems

The purpose of these systems is to increase efficiencies and promote uniformity among a chain of stores. However, problems arise from several areas. All stores in the chain may not be packaging a particular commodity in the same way. One store may include an extra soaker pad in packages of a particular cut of meat. Another store may use a different size tray for a particular item. If a tare value is found to be incorrect at one store, the information may not be passed along to the rest of the outlets. Or, there may be only one tare value programmed for a product that may be packaged in several different sized packages (e.g. family pack meats, etc.)

The responsibility for accurate net weight declarations lies with the individual who weighs and labels the package. The sophistication of current scales and tare programs has resulted in a dependence on technology to provide accurate net weights. The packager relies too heavily on the tare information provided by the system. The human element of common sense becomes secondary to the power of the “black box.” Systems collapse and individuals fail to act due to a breakdown of a technological link.

It is imperative that the packager has an understanding of proper tare procedures in order to produce an accurately labeled package. When the “black box” breaks down there will still be a need to produce packages.

The operator must have the autonomy and authority to override the centralized tare program when situations arise that would result in inaccurate weight declarations (i.e. lack of customary packaging materials or special marketing of products).

Point of Sale Tare Weights

Tare weights must be programmed for **all** bulk commodities that are weighed at the register. Inspectors often find multiple produce items and dry bulk food items with no program tare at the register. Bulk coffee bean bags are particularly troublesome, resulting in shortages to the customer as large as 30 cents per transaction.

Multiple Package Sizes

This topic is mentioned several times in this handbook, but its importance bears repeating. The same commodity packaged in several different package sizes requires different tare weights. This applies to hamburger, pork chops, and roasts as well as potato salad, coleslaw and dips. It also applies to bulk items sold in multiple containers.

Miscellaneous Product Codes

When an inspector selects a package that is labeled “Miscellaneous Meat” or “Miscellaneous Deli,” red-flag warnings are immediately raised. Most of the time these packages will exhibit either no tare weight or an inaccurate tare weight. This “miscellaneous” code is used primarily for labeling new products not included as a specific item in the central tare program. All too often, only a minimal tare or none at all is associated with this code. Proper training of the packager is essential to proper labeling, including the ability to determine and enter the proper tare weights.

Shelf Life and Moisture Loss

All perishable products will experience some degree of moisture loss regardless of the packaging material. Moisture loss leads to short-weight packages. The longer the shelf life of a commodity, the longer the exposure period, and the greater the moisture loss. Random weight products with a long shelf life need to be re-weighed periodically to insure accurate net weight declarations. This is particularly true of frozen meat and seafood products with a very long shelf life. Other problem areas include smoked meats and fish or whole-bagged fresh chickens, which tend to lose moisture rapidly due to leaking packages.

Standard Weight Packages

Standard weight packages are packages of a particular commodity that all contain the same net weight. These packages contain a net weight declaration on the package provided by the manufacturer. They are intended to be scanned at the check-out register. Dual labeling of weight is illegal and confusing to the customer. (Example: 5 pound cryovac hams)

Package Requirements

1. Minnesota Statute and Rules

The role of the Weights and Measures Division is to promote equity in the marketplace. The agency is neither pro-consumer nor pro-business but an impartial arbiter seeking a level playing field for all involved in transactions based on weights and measures. The inspection staff fulfills much the same role as an umpire or referee, ensuring a fair and consistent marketplace for buyer and seller.

The responsibilities and duties of the Department of Commerce, Weights and Measures Division are defined in Minnesota Statutes, Chapter 239.

Further regulations are defined in Department of Commerce Rules, Chapter 7601. The following excerpts pertain to package checking and scale inspection.

Complete text for both of these chapters can be found at www.revisor.leg.state.mn.us.

Summary of Minnesota Statutes 239.01 – 239.24

The Weights and Measures Division, under the jurisdiction of the Department of Commerce, supervises and controls all weights, weighing devices, and measures in the state.

The Division is responsible for:

- ensuring that weights and measures in commercial service within the state are suitable for their intended use, properly installed, accurate, and properly maintained by their owners or users;
- preventing unfair or deceptive dealing by weight or measure in a commodity or service advertised, packaged, sold or purchased within the state;
- making the division's precision calibration and certification capabilities available to users of physical standards or weighing and measuring equipment;
- promoting uniformity between the weights and measures requirements of Minnesota and those of other states and federal agencies; and

- adopting weights and measures requirements that will protect consumers, promote equity between buyers and sellers, and encourage desirable economic growth.

The Division has the power to:

- conduct investigations to ensure compliance with the law;
- weigh, measure, or inspect packaged commodities kept, offered, or exposed for sale, sold, or in the process of delivery to determine whether they contain the amount represented and whether they are kept, offered, or exposed for sale in accordance with the law and department rules. In carrying out this section, the director must employ recognized sampling procedures, such as those contained in National Institute of Standards and Technology Handbook 133, "Checking the Net Contents of Packaged Goods;"
- prescribe the appropriate term or unit of weight or measure to be used for a specific commodity, especially when an existing term makes value comparisons difficult or creates an opportunity for consumer confusion; and
- allow reasonable variations from the stated quantity of contents, including variations caused by loss or gain of moisture during the course of good distribution practice or by unavoidable deviations in good manufacturing practice, only after the commodity has entered commerce within the state.

When necessary to enforce statute or rule, the director is:

- empowered to seize for use as evidence and without formal warrant, any false weight, measure, weighing or measuring device, package, or commodity found to be used, retained, or offered or exposed for sale in violation of the law;
- authorized to enter commercial premises during normal business hours; and
- empowered to issue stop-use, hold, and removal orders with regard to weights and measures commercially used and packaged commodities or bulk commodities kept, offered, or exposed for sale, that do not comply with the weights and measures laws.

Definitions

“Net weight” means the weight of the commodity excluding materials, substances, or items not considered to be part of the commodity. These include containers, conveyances, bags, wrappers, packaging materials, labels, individual piece coverings, decorative accompaniments, coupons and the like.

“Package” means a commodity put up or packaged in advance of sale in units suitable for either wholesale or retail sale.

“Sale from bulk” means the sale of commodities when the quantity is determined at the time of the sale.

Method of Sale

Whether sold by weight, measure or count, the method of sale for a commodity must allow the buyer to make price and quantity comparisons. The department may adopt rules to administer this section.

Information Required in Packages:

- the identity of the commodity in the package, unless the commodity can be easily identified through the wrapper or container;
- the net quantity in terms of weight, measure, or count;
- the name and address of the manufacturer, packer, or distributor, if the packages were not produced on the premises where they are offered, exposed, or held for sale; and
- the unit price, if the packages are part of a lot containing random weight packages of the same commodity.

Packaged commodity; advertising for sale

When a packaged commodity is advertised with its retail price, the quantity declaration that appears on the package must also appear in the advertisement.

Formal inspection

Light capacity scales in retail establishments such as grocery stores, other retail food establishments, or hardware stores, are inspected not more than once every 36 months except when

- (1) the owner requests an inspection,
- (2) when the scale is inspected as part of an investigation, or
- (3) when the scale has been repaired.

Packaged food commodities in grocery stores and other retail food establishments are inspected not more than once every 36 months except when

- (1) the owner requests an inspection or
- (2) when packages are inspected as part of an investigation.

Any person hindering, impeding, or restricting in any way any employee of the division while performing official duties shall be guilty of a misdemeanor.

Summary of Department of Commerce Rules Chapter 7601 Definitions

“Commercial,” “commercial use,” and “commercial purpose” refer to

weights and measures used or located on premises where they could be used to:

- determine the weight, measure, or count of commodities or things sold, offered, or exposed for sale, on the basis of weight, measure, or count; or
- compute the basic charge or payment for services rendered on the basis of weight, measure, or count.

“Place in service” means to authorize commercial use of newly installed or repaired weighing and measuring equipment pending an inspection by the division.

“Registered person” and **“registrant”** mean a person who has voluntarily registered with the division and who installs, services, repairs, or reconditions weighing and measuring equipment.

2. Joint Policy Memo-

INTEROFFICE MEMORANDUM

Date: September 23, 2003

Revised Joint Policy #001

To: All Inspectors, Compliance Officers and Supervisors
From: Gene Hugoson, Commissioner, Department of Agriculture
Glenn Wilson, Commissioner, Department of Commerce
Re: Measuring the Quantity of Certain Foods

PURPOSE

To define a common regulatory approach for inspecting specified types of foods so that both agencies apply the laws and rules of the state in a uniform and non-conflicting manner.

BACKGROUND

The Department of Agriculture has a statutory responsibility to inspect food establishments, inspect labeling of food products (including net quantity of contents), and establish food standards.

The Department of Commerce has a statutory responsibility to inspect commercial scales and the net quantity of contents of packaged commodities, including food.

Both agencies, therefore, have concurrent jurisdiction over the accuracy of net content declarations for packaged foods. Neither agency has superior jurisdiction. The Minnesota Legislature has charged the agencies to cooperate in this area.

Given these statutory responsibilities, we establish the following policy for the Department of Agriculture, Dairy and Food Inspection Division, and the Department of Commerce, Weights and Measures Division.

POLICY

The statutes enforced by the agencies have equal bearing on these issues. If a conflict occurs, notify the Food Program Manager for Dairy and Food Inspection or the State Program Administrator for the Weights and Measures Division. Conflicts between statutes will be resolved by using methods prescribed in Minnesota Statutes, Chapter 645, regarding interpretation of statutes.

The Department of Agriculture will provide a copy of this policy to each of its delegated agents and assistance on interpretation when requested.

Packaged foods shall be labeled in a way that will allow consumers to make informed decisions concerning the net quantity of contents. This policy addresses food items that have traditionally been a source of confusion for regulated food retailers and the inspection staff of both agencies. Packaging must conform to the provisions of federal and state regulations pertaining to the Fair Packaging and Labeling Act.

PRODUCE

1. Melons

- Whole melons may be sold by weight or count.
- Melons cut into halves or quarters must be sold by weight. They may be weighed at time of sale at the register provided that an adequate tare weight is deducted for the protective sanitary wrap.
- Melons with the rind removed and cut into chunks shall be labeled with the net weight, unit price and total price.

2. Berries:

- Berries may be sold by dry measure (pint, quart) or by weight.
- Berries sold from bulk may be weighed at time of sale at the register, provided that an adequate tare weight is deducted for the plastic bag and bag closure device.
- Berries displayed in a package and sold by weight shall be labeled with the net weight, unit price and total price.

3. Broccoli, Cauliflower, Asparagus:

- These items may be sold by the bunch or by weight.
- Broccoli, cauliflower and asparagus sold by weight may be weighed at time of sale at the register, provided that an adequate tare weight is deducted for the protective sanitary wrap, plastic bag, bag closure device and rubber band.

4. Tomatoes:

- Tomatoes may be sold by weight or by count.
- A package of tomatoes sold by weight shall be labeled with net weight, unit price and total price.
- Cherry tomatoes may be sold by dry measure or by weight.

DELI ITEMS

Standard weight packaged deli items such as sandwiches, salads, cheeses, sliced meats, parfait cups, casseroles, party trays, pizza and dinners must be labeled with the net weight of the package and the price.

Random weight packaged deli items such as the commodities listed above shall be labeled with the net weight of the package, unit price and total price.

MEAT AND POULTRY

1. Packaged turkeys and other random weight whole poultry:

- Must be sold by weight and labeled with net weight, unit price and total price.
- They must not be weighed at time of sale at the register.

2. Cut up or processed poultry or meat:

- Packaged random weight poultry and meat products must be labeled with net weights, unit price and total price.
- Standard packaged poultry and meat (all packages of the same commodity have the same net weight) shall be labeled with a net weight. The price of these packages shall be clearly marked at the display location

Only unpackaged poultry and meat products may be weighed at time of sale.

BAKERY

- All pre-packaged bakery items must be labeled with a correct net weight declaration.
- This requirement does not prohibit inclusion of a count on the label (cookies, donuts).

GENE HUGOSON, Commissioner
Department of Agriculture

GLENN WILSON, Commissioner
Department of Commerce

cc: Special Attorney General Department of Agriculture
Special Attorney General Department of Commerce
Delegated Agents of Department of Agriculture

3. National Institute of Standards and Technology (NIST)

Formerly the National Bureau of Standards, the NIST convened the first meeting of state weights and measures officials in 1905, thereby establishing the National Conference on Weights and Measures. The NCWM is a professional organization of weights and measures officials and representatives of business, industry and consumer groups from all over the country. NIST cooperates with the NCWM to develop standards in the form of uniform laws, regulations, and methods of practice, which are then published by NIST.

NIST Handbooks may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington DC 20402, Telephone 202-512-1800, FAX: 202-512-2250. Please contact GPO for current price information.

- NIST Handbook 44, Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring devices.
- NIST Handbook 130, Uniform Laws and Regulations.
- NIST Handbook 133, Checking the Net Contents of Packaged Goods – Fourth Edition.

Or, go to the NIST Website: www.nist.gov

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